CLAIMS

All pending claims are reproduced below for the convenience of the Examiner.

No claim amendment is presently requested.

1. (Previously presented) A method of measuring paper formation or distribution in a papermaking process, comprising:

(a) providing a forming fabric;

(b) depositing a paper slurry upon the forming fabric to form a wet web;

(c) transmitting light from a light source upon a first side of the wet web;

(d) reflecting the light from the first side of the wet web to a camera, thereby forming a pattern of reflected light;

(e) forming a visual image of the wet web corresponding to the pattern of the reflected light; and

(f) utilizing the pattern of reflected light to which the visual image corresponds to control paper formation in the wet web.

2. (Original) The method of claim 1 further comprising the step of moving the wet web longitudinally through the light pathway to facilitate the impingement of light upon the surface of the wet web.

3. (Original) The method of claim 1 in which the light source comprises a light line.

4. (Original) The method of claim 1 in which there are at least two independent sources of light.

5. (Original) The method of claim 1 in which the step of forming an image further comprises receiving the reflected light in a line scan camera.

6. (Original) The method of claim 5 in which the camera operates at a speed of at least about 50,000 Hz.

7. (Original) The method of claim 6 in which pixels are generated in forming the image.

8. (Original) The method of claim 7 in which the web comprises a water content of at least about 80% water during the reflecting step.

9. (Original) The method of claim 8 in which the web comprises a water content of between about 80% to about 95%.

10. (Original) The method of claim 2 in which the wet web moves at a speed of at least about 4000 feet/minute.

11. (Original) The method of claim 10 in which the forming fabric is black in color.

12. (Previously presented) A method for measuring paper formation in real time on a papermaking process, comprising:

(a) providing a rotating forming fabric having an upper and lower surface;

(b) depositing a paper slurry upon the upper surface of the forming fabric to establish a wet paper web, the wet paper web moving at a speed of at least about 4000 feet per minute;

(c) transmitting light from a light source upon the upper surface of the wet paper web;

(d) reflecting light from the upper surface of the wet paper web to a camera thereby forming a pattern of reflected light;

(e) forming a visual image of the wet paper web corresponding to the pattern of the reflected light; and

(f) utilizing the pattern of reflected light to which the visual image corresponds to measure paper formation in the wet web.

13. (Previously presented) The method of claim 12 in which the image is displayed upon a computer monitor.

14. (Previously presented) The method of claim 12 in which the camera sends to a computer signals representing light received by the camera, further wherein the computer comprises a processor, whereby the processor of the computer compares said signals with predetermined stored values to determine the degree of deviation of the formation of the paper web from desired paper web formation values.

15. (Previously presented) The method of claim 14 in which the processor is configured to adjust one or more papermaking parameters in real time to alter the characteristics of the wet web to cause the wet paper web to conform to desired paper web formation values.

16. (Previously presented) The method of claim 15 in which the papermaking parameters comprise the group consisting of:

a) paper uniformity,
b) sheet water content,
c) stock impingement angle,
d) vacuum box position, and
e) forming fabric tension.

17. (Previously presented) The method of claim 12 in which the wet web forms a paper having a weight of less than about 16 lbs/2880 ft^2.

18. (Previously presented) The method of claim 12 in which the camera is a line scan camera, and the image formed is constructed by scanning lines of the image.

19. (Previously presented) The method of claim 12 in which the light is transmitted from a light source upon the surface of the wet paper web at an impingement angle of between about 25 and 65 degrees.

20. (Previously presented) The method of claim 12 in which more than one light source is employed to transmit light.

21. (Previously presented) The method of claim 12 in which a vacuum box is employed to take water from the wet web while the wet web is moving along the surface of the rotating forming fabric.

22. (Previously presented) The method of claim 12 in which light from the light source travels through at least one focusing lens before impinging upon the surface of the wet web.

23. (Previously presented) The method of claim 1, wherein the forming fabric has a dark color.

24. (Previously presented) The method of claim 12, wherein the forming fabric has a dark color.

25. (Previously presented) The method of claim 12, wherein the forming fabric comprises a black color.

26. (Previously presented) A method of measuring formation or distribution in a web forming process comprising the steps of:

providing a forming fabric;
depositing a slurry of fibers upon the forming fabric to form a wet web;
emitting light from a light source upon a first side of the wet web;

detecting reflected light from the wet web by a camera positioned in communication with the first side of the web, the camera forming a pattern of reflected light;

forming a visual image of the wet web corresponding to the pattern of the reflected light; and

based upon the formed visual image, adjusting one or more web making parameters in order to improve the web formation.

27. (Previously presented) A method as defined in claim 26, wherein the web making parameter comprises machine speed, fiber furnish blend, stock freeness, basis weight, stock impingement angle, vacuum box position, or forming fabric tension.